

CAITLIN (CAITIE) LUSTIG

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SUMMARY

I am a researcher with a background in human-computer interaction, information science, computer science, user centered design, and science and technology studies. I use interviews, surveys, participant observation, and literature reviews to conduct my research, which has spanned topics such as implications of using algorithms to curate content in social media, manage labor, and mediate diversity and inclusion. I take an interdisciplinary approach that combines theory and practice-based solutions for corporations and designers. I have extensive independent and collaborative writing experience, including experience as a writing consultant.

EDUCATION

University of Washington

Seattle, Washington

PhD in Human Centered Design and Engineering (ongoing)

Advisor: Prof. Daniela Rosner

University of California, Irvine

Irvine, California

Master of Science in Informatics, 2018

Thesis: "Algorithmic Authority of the Bitcoin Blockchain"

Advisors: Prof. Bonnie Nardi and Prof. Geoffrey Bowker

University of Washington

Seattle, Washington

Bachelors of Science in Computer Engineering, Hardware Track, 2008

PUBLICATIONS AND PRESENTATIONS

PEER-REVIEWED FULL PAPERS

1. **Caitlin Lustig**, Sean Rintel, Liane Scult, and Siddharth Suri. "Stuck in the middle with you: The transaction costs of corporate employees hiring freelancers". Conference on Computer Supported Cooperative Work and Social Computing. ACM, 2020.
2. Morgan Klaus Scheuerman, Kandrea Wade, **Caitlin Lustig**, Jed Brubaker. "How We've Taught Algorithms to See Identity: Constructing Race and Gender in Image Databases for Facial Analysis". Conference on Computer Supported Cooperative Work and Social Computing. ACM, 2020. **(Best paper award, and award for Contributions to Diversity & Inclusion.)**
3. **Caitlin Lustig**. "Intersecting Imaginaries: Visions of Decentralized Autonomous Systems." Conference on Computer Supported Cooperative Work and Social Computing Companion. ACM, 2019.
4. Jaime Snyder, Elizabeth Murnane, **Caitlin Lustig**, Stephen Voida. "Visually Encoding the Lived Experience of Bipolar Disorder." CHI Conference on Human Factors in Computing Systems. ACM, 2019.
5. Yong Ming Kow and **Caitlin Lustig**. "Imaginaries and Crystallization Processes in Bitcoin Infrastructuring." Journal of Computer Supported Cooperative Work (JCSCW). 2018.
6. **Caitlin Lustig** and Bonnie Nardi. "Algorithmic Authority: The Case of Bitcoin". Proceedings of HICSS-48. Kauai, HI: IEEE Computer Society. January 5-8, 2015.
7. Ruth E. Anderson, Waylon Brunette, Erica Johnson, **Caitlin Lustig**, Anthony Poon, Cynthia Putnam, Odina Salihbaeva, Beth E. Kolko, Gaetano Borriello. "Experiences with a Transportation Information System that Uses Only GPS and SMS". ICTD 2010 at Royal Holloway, University of London. December, 2010.
8. Ruth E. Anderson, Anthony Poon, **Caitlin Lustig**, Waylon Brunette, Gaetano Borriello and Beth E. Kolko. "Building a Transportation Information System Using Only GPS and Basic SMS Infrastructure". ICTD 2009 at Carnegie Mellon Qatar. April, 2009.

EXTENDED ABSTRACTS

1. Michael Ann DeVito, **Caitlin Lustig**, Ellen Simpson, Kimberley R. Allison, Tya Chuanromanee, Katta Spiel, Amy J. Ko, Jennifer Rode, Brianna Dym, Michael Muller, Morgan Scheuerman, Ashley Walker. SIG: "Queer in HCI: Strengthening the Community of LGBTQIA+ Researchers and Research". In Extended Abstracts of the 2020 CHI Conference on Human Factors in Computing Systems, 2021.
2. Michael Ann DeVito, Ashley Marie Walker, **Caitlin Lustig**, Amy J. Ko, Katta Spiel, Alex A. Ahmed, Kimberley Allison, Morgan Scheuerman, Brianna Dym, Jed R. Brubaker, Ellen Simpson, Naveen Bagalkot, Noopur Raval, Michael Muller, Jennifer Rode, Mary L. Gray. SIG: "Queer in HCI: Supporting LGBTQIA+ Researchers and Research Across Domains". In Extended Abstracts of the 2020 CHI Conference on Human Factors in Computing Systems, 2020.
3. Chris Elsdon, Bettina Nissen, Karim Jabbar, Reem Talhouk, **Caitlin Lustig**, Paul Dunphy, Chris Speed, and John Vines. "HCI for Blockchain: Studying, Designing, Critiquing and Envisioning Distributed Ledger Technologies." In Extended Abstracts of the 2018 CHI Conference on Human Factors in Computing Systems, 2018.
4. **Caitlin Lustig**, Katie Pine, Bonnie Nardi, Lilly Irani, Min Kyung Lee, Dawn Nafus, and Christian Sandvig. "Algorithmic Authority: the Ethics, Politics, and Economics of Algorithms that Interpret, Decide, and Manage". Proceedings of the 2016 CHI Conference Extended Abstracts on Human Factors in Computing Systems.
5. Susann Wagenknecht, Min Kyung Lee, **Caitlin Lustig**, Jacki O'Neill, and Himanshu Zade. "Algorithms at Work: Empirical Diversity, Analytic Vocabularies, Design Implications". Proceedings of the 19th ACM Conference on Computer Supported Cooperative Work and Social Computing Companion. ACM, 2016.

WORKSHOP AND NON-ARCHIVAL PAPERS

1. **Caitlin Lustig**, Ridley Jones, Josephine Hoy, Negin Alimohammadi, and Charlotte P. Lee. "Resilience and the Rapid Shift to Remote Working at a University: Emerging Questions". The New Future of Work Symposium, 2020.
2. Nicholas Proferes, Alissa Centivany, **Caitlin Lustig**, and Jed Brubaker. Workshop proposal: "Studying User Perceptions and Experiences with Algorithms". International AAAI Conference on Web and Social Media (ICWSM) 2017.
3. Jed R. Brubaker, **Caitlin Lustig**, Gillian R. Hayes. "PatientsLikeMe: Empowerment and Representation in a Patient-Centered Social Network". CSCW Research in Healthcare: Past, Present, and Future CSCW 2010 workshop.
4. **Caitlin Lustig**, Hristo Novatchkov, Lucy Dunne, Mike McHugh and Lorcan Coyle. "Using Colocation to Support Human Memory". MeMos 2007: Supporting Human Memory with Interactive Systems. Workshop at the 2007 British HCI International Conference. 2007.
5. **Caitlin Lustig** and Lorcan Coyle. "Reminding Short-Term Memory Sufferers to Complete Routine Tasks". University College Dublin. UCDCSI Technical Report 2007-10. 2007.

OTHER PUBLICATIONS

1. Elizabeth Murnane, **Caitie Lustig**, Tara Walker, Beck Tench, Stephen Voida, and Jaime Snyder. "Personal Informatics in Interpersonal Contexts: Towards the Design of Technology that Supports the Social Ecologies of Long-Term Mental Health Management". Medium.com 2019. <https://medium.com/acm-cscw/personal-informatics-in-interpersonal-contexts-towards-the-design-of-technology-that-supports-the-6a3d03448c25>
2. **Caitlin Lustig**. UC Irvine's Celebration of Graduate Success booklet, 2016.

PRESENTATIONS

1. *Invited talk*: "When algorithms turn bittersweet: Improving experiences of bittersweet algorithmically curated sensitive content" for HCDE 418: User Experience Design (2021).
2. *Invited talk*: "Designing for Freshmen's Well-being" for HCDE 210: Explorations in Human Centered Design (2020).
3. *Invited lecturer*: "Algorithms in the Social Sphere" for HCDE 419: Concepts in Human-Computer Interaction (2020).
4. *Invited presenter* for the Microsoft Future of Work Summit: "Benefits of and concerns about the gig economy for FTEs" (2019).
5. *Invited presenter* at the Consortium for the Science of Sociotechnical Systems (CSST): "Theorizing Algorithms as Boundary Objects"; panel member "Algorithms and Their Consequences" (2018).
6. *Invited presenter* at Data & Society: Governance through Protocol: Scaling Bitcoin (2017).
7. *Invited lecturer*: Global Disruption and Information Technology (2014) and Technical Communication (2016).
8. Presenter and organizer for the "Writing and Publishing an Article in an Interdisciplinary Field", "Productivity Software: Methods and Applications for Time Management", "Popular Citation and Writing Software", and "Writing Your Way to a Focused Research Question" workshops at UC Irvine's Graduate Resource Center, (2015-2016).

CONFERENCE WORKSHOPS, PANELS, & INSTITUTES

- Organizer: CHI 2021 Special Interest Group for Queer in HCI: Strengthening the Community of LGBTQIA+ Researchers and Research

- *Organizer*: CHI 2020 Special Interest Group for Queer in HCI: Supporting LGBTQIA+ Researchers and Research Across Domains
- *Organizer*: CHI 2018 workshop: HCI for Blockchain: Studying, Designing, Critiquing and Envisioning Distributed Ledger Technologies
- *Organizer*: ICWSM 2017 workshop: Studying User Experiences and Experiences with Algorithms
- *Organizer*: CSCW 2016 workshop: Algorithms at Work: Empirical Diversity, Analytic Vocabularies, Design Implications
- *Lead organizer and moderator*: CHI 2016 panel: Algorithmic Authority: the Ethics, Politics, and Economics of Algorithms that Interpret, Decide, and Manage
- *Participant*: Consortium for the Science of Sociotechnical Systems (CSST), Summer Research Institute, 2016
- *Participant*: Hackademia Summer School, Lüneburg, Germany, 2016, <25% acceptance rate
- *Participant*: iConference 2016 Doctoral Colloquium, <25% acceptance rate
- *Participant*: Online Dublin Computer Science Summer School, 2007

WORK AND RESEARCH EXPERIENCE

INTERNSHIPS, CONSULTING, & FREELANCE EXPERIENCE

Algorithmic Care

Graduate Research Assistant for NYU's AI Now Institute working with Dr. Elizabeth Kazianus

New York City, New York
July 2020 to present

I am working on a project on narratives AI and health. My group and I did a "close reading" of three behavioral health datasets to critically examine the sociotechnical limitations, implications, and narratives of AI behavioral health systems: what these datasets leave out and where their construction does not align with lived experiences.

Research on the Freelance Economy

Freelancer for Microsoft Corporation

Redmond, Washington
April 2020 to June 2020

Experiences of Clients of the Freelance Economy

Microsoft Research Intern working with Drs. Siddharth Suri and Sean Rintel, and Liane Scult

Redmond, Washington
April 2019 to July 2019

The goal of my study was to learn about the experiences of full-time employees (FTEs) who hire gig economy workers. I interviewed 36 full time employees about their experiences with the gig economy and conducted participant observation on the gig platform itself.

Research on Facebook Memories Users

Research staff for the University of Colorado, Boulder

Boulder, Colorado
July 2019-present

I recruited and conducted interviews with 20 Facebook users about sensitive curated content, such as death or divorce, that they saw through Facebook's Memories feature. I conducted inductive coding and used thematic analysis on interviews.

User Communities of Practice

Research consultant for a large design company (anonymized)

San Francisco, California
April 2015 to June 2015

This research project was funded by a large design company, looking at how their users develop communities of practice and expertise through online spaces. In this project, I analyzed forum posts and websites used by these users, interviewed employees of the company, interviewed expert users, and met with the company to learn about how they understood their users.

TEACHING & WRITING CONSULTANT EXPERIENCE

Teaching Assistant for "Concepts in Human-Computer Interaction"

University of Washington

Seattle, Washington
March 2020 to June 2020

Writing Consultant

University of California, Irvine's Graduate Resource Center

Irvine, California
June 2015 to June 2017

- Helped other graduate students with grammar, structure, clarity, and flow for conference and journal papers, grant and fellowship applications, coursework, résumés and CVs, and cover letters.

- Helped undergraduates with graduate school and fellowship applications.
- Organized and led Dissertation Bootcamps and taught about writing and managing stress over a 3-day “write-in”.
- Developed and led small workshops to teach issues related to writing, such as finding a research question.
- Worked with Graduate Division on a publication for the Celebration of Graduate Success event, writing the profiles of over 30 honored alumni under tight deadlines.

Teaching Assistant for “Operating Systems”, “How Computers Work”, “Human-Computer Interaction”, “Games & Society”, and “Technical Communication”, “The Future of Money: From Barter to Bitcoin”
 Irvine, California
 University of California, Irvine 2009-2010; 2013-2015

R E S E A R C H P R O J E C T S

Stemming the Spread of COVID-19: Coordinating Remote Work for Social Distancing
 University of Washington
 Seattle, Washington
 March 2020 to present

This NSF-funded project is focused on how people are coordinating to support remote working and social distancing during COVID-19. We are interested in how people work together to meet the practical, social, and emotional needs of their work communities during a sudden transition to remote work. We are studying a number of groups, networks, and departments at the University of Washington. I manage the project and have conducted interviews and observations, as well as first authored a New Future of Work 2020 paper.

Algorithmic Mediation for Diversity
 eScience, University of Washington
 Seattle, Washington
 September 2019 to present

This project is on how algorithms are used to promote diversity. I am interviewing researchers involved with creating and using one such algorithm to learn about the social dynamics and ethics of using algorithmic mediation. I also conducted participant observation with data scientists and AI/ML researchers. This project also has a literature review component, comparing discussions of fairness and bias in computer science literature with the discussions in critical computational studies. We use this analysis as a way gauging how these literatures may have influenced each other, how far apart these literatures are, and the gaps that need to be overcome to put them in conversation with one another and to translate between them.

User-Centered Design for Freshmen During COVID-19
 Student in User-Centered Design at the University of Washington
 Seattle, Washington
 October 2020 to December 2020

I worked on a group project in which we designed and evaluated a prototype for an application to support freshmen’s emotional and social needs during COVID-19. I led the designing a survey, conducting interviews, developing personas, and conducting and designing user studies, and writing documentation.

Constructing Race and Gender in Image Databases for Facial Analysis
 University of Washington
 Boulder, Colorado
 October 2019 to January 2020

We analyzed a corpus over 90 image databases to determine how for race and gender classifications were used for training facial recognition systems. We make recommendations for how dataset authors can critically engage with race and gender. I am a co-author for a CSCW 2020 paper that came out of this project, which received a best paper award and award for Contributions to Diversity & Inclusion.

Visualizing Bipolar Disorder
 University of Washington
 Seattle, Washington
 June 2018 to April 2019

This project is in collaboration with the University of Washington, University of Colorado, Boulder, and Stanford University. It focuses on developing better ways to represent bipolar people’s lived experiences through visualizations. This project involved three rounds of interviews with bipolar people, using visual elicitations to examine how participants monitored their rhythms. My role in this project was to help analyze interviews, and I am a co-author for a CHI 2019 paper.

Algorithmic Authority of the Bitcoin Blockchain
 University of California, Irvine
 Irvine, California
 January 2015 to June 2018

In this thesis, I expanded on the concept of algorithmic authority, a concept that I introduced in earlier work to understand the role of algorithms in daily life. Algorithmic authority is the legitimate power of algorithms to direct human action and to impact which information is considered true. Through a study of

the users of the cryptocurrency Bitcoin, I explored what it means to trust in algorithmic authority in an open source, decentralized system in contrast to the authority of centralized and corporate software. My study of the Bitcoin community utilized data from interviews, a survey, and observation of offline and online spaces.

Smart Contracts

University of California, Irvine

Irvine, California
June 2016 to September 2016

"Smart contracts" are contracts that are written in code and automatically enforced when certain conditions are met. I researched the sociotechnical implications of these smart contracts in collaboration with the Institute for Money, Technology & Financial Inclusion.

Algorithmic Authority of Bitcoin

University of California, Irvine

Irvine, California
November 2012 to January 2015

Bitcoin is seen as a relatively unique form of currency because it does not rely on a government or centralized authority for regulation or value. This project examines why users say that they trust the algorithms of Bitcoin's code and the nuances of this trust. In the course of researching this project, I explored what the increasing power of code and algorithms means for society.

Remote Occupation Socialization

University of California, Irvine

Irvine, California
June 2013-August 2013; September 2014 to March 2015

This project was a multi-sited ethnographic study of workers who learn the norms and skills of their occupation in remote locations. I qualitatively coded interview data from Mexican entrepreneurs who had developed or worked in tech start-ups. I later continued this work through exploring how this project contributes to new understandings of communities of practice.

Expressive Topologies

University of California, Irvine

Irvine, California
September 2012 to September 2014

This project examined new forms of knowledge expression and the future of academic publishing. I worked on a website that represented social networking sites as archives by using the themes from Derrida's *Archive Fever*. This interactive website resembled a famous social media platform. We used this website to tell a story to visitors and to encourage them to think about the ways in which identity can be represented through the archive.

Music for Labs

University of California, Irvine

Irvine, California
January 2012 to September 2014

For this project, we built upon research in computer supportive collaborative work and ubiquitous computing in order to explore how knowledge and presence can be conveyed through music in a research lab. We used RFID tags to detect when lab members entered and left the lab. My work on the system was centered on creating the technical implementation of this system.

Event Detection through Twitter Updates

University of California, Irvine

Irvine, California
June 2010 to September 2010

In 2010, over 65 million tweets were posted a day, which made it a rich site for data analysis. In this project, I scraped Twitter using Python. I then analyzed tweets with statistical methods to detect when unusual events were taking place in a certain location. Users could subscribe to various locations and get notified when events happened in that location; in particular, this system could let users know when emergencies were taking place.

***bus (Starbus)**

University of Washington

Seattle, Washington
September 2007 to June 2009

The *bus project grew out of my senior capstone work on technology for developing regions. In many regions of the world, public transportation is unreliable and difficult to use. One such place is Kyrgyzstan where the streets have multiple names, there are no set bus stops, and there is no set bus schedule. To make the bus system easier to use, we developed a low-cost, low-infrastructure bus tracking system.

Online Dublin Computer Science Summer School

University College Dublin

Dublin, Ireland
June 2007 to September 2007

The Online Dublin Computer Science Summer School was an undergraduate research internship at University College Dublin. I developed a glove that contained an RFID reader. The glove detected user actions based on objects they touched. This glove was developed for users with memory loss or dementia who might forget what they were doing while performing a complex task.

RFID Ecosystem

University of Washington

Seattle, Washington
September 2006 to January 2008

The RFID Ecosystem explored the ways in which RFID technology could be used to track human behavior in useful and ethical ways. Processing massive amounts of sensitive data was a major aspect of the project. Therefore, before the system was in wide use, we needed ways to simulate heavy usage. To that end, I created a simulator for realistically generating tag read events for a given location.

P R O G R A M M I N G W O R K E X P E R I E N C E

Firmware Application Engineer graduate intern

Broadcom Corporation

Irvine, California
July 2011 to August 2012

- Developed Bluetooth firmware for human interface devices (television remotes, mice, keyboards) in C++.
- Developed and tested tools for uploading firmware and over the air updates in Perl and C++.
- Customized and maintained a tool for monitoring more advanced features of remotes; this included button presses, visualizing touchpad and motion control, and recording audio.
- Communicated with manufacturers of the human interface devices and provided them with documentation.
- Trained other employees on using Linux tools.

Grameen Foundation

Software Consultant

Seattle, Washington
July 2009 to September 2009

- Developed and tested the Mifos web software for microfinance institutions using Java.
- Became familiar with agile software development, the scrum framework, and extreme programming.

Software Engineer in the Wireless Security Administration Engineering Group

Intermec Technologies

Everett, Washington
June 2008 to May 2009

- Worked on software for handheld computers in supply chain management for scanning barcodes, RFIDs, etc.
- Developed wireless networking software for 802.11 WiFi radios on Windows CE and Windows Mobile hand-held computers in C++.
- Analyzed network packets using various network analysis tools to debug wireless software.

Student Programmer for the Network Architecture Tools Group

University of Washington, Computing and Communications

Seattle, Washington
September 2005 to January 2008

- Developed tools using Perl and PostgreSQL for the Network Operations Center at the University of Washington.
- Created a tool for parsing, creating, and managing DNS records.
- Developed tools for subnet management, SNMP, and other network management tasks.

Software Test Associate

Research in Motion

Issaquah, Washington
January 2007 to July 2007

- Developed tools for the software testing team that interfaced with their ticketing system.
- Developed an interactive website using PHP, CSS, and Javascript to show software bug and ticket trends.

Help Desk Associate

University of Washington Medical Center

Seattle, Washington
February 2005 to September 2005

- Acted as a liaison between medical users (nurses, doctors, and technicians) and desktop support.
- Troubleshooted issues with electronic medical record software, account management, and hardware problems.

A W A R D S A N D S E R V I C E

S C H O L A R S H I P S , G R A N T S , A N D A W A R D S

- CSCW 2020 best paper award, and award for Contributions to Diversity & Inclusion.
- 2017 CHI Excellent Reviewer awardee.
- Finalist for the University of Colorado's Chancellor's Postdoctoral Fellowship Program 2017
- Selected for the ACM-W scholarship to attend CHI 2016, which included an assigned mentor
- Selected for a travel grant to attend Financial Cryptography and Data Security 2016
- Selected for UC Irvine's Associate Graduate Student's travel grant to attend CSCW 2016
- Selected for the iConference 2016 doctoral colloquium, <25% acceptance rate
- Selected for UC Irvine's School of Information and Computer Sciences' travel grant to attend HICSS 2015
- ICS Fellowship: three years of funding to outstanding applicants—UC Irvine, 2009
- Microsoft Scholarship—University of Washington, 2008
- Entered the University of Washington's Computer Science and Engineering major via the Early Decision Program
- Entered the University of Washington through the University Academy program at the age of 16

S E R V I C E

- Co-chair for Queer in HCI with Dr. Michael Ann DeVito, 2020-present.
- Member of the IEEE Blockchain Initiative Education subcommittee, 2018-2019.
- Volunteer for the Gender Diversity's tween group at Seattle Children's Hospital, 2018-2019.
- Associate Chair for CHI 2019 Workshops.
- Associate Chair for CHI 2017 Late Breaking Work.
- iConference 2015 student volunteer.
- From 2012-2015, I supported and maintained the web server for the EVOKE lab's website: <http://evoke.ics.uci.edu>
- Member of UC Irvine's Associated Graduate Student council from the 2011-2012 school year.
- Member of the IEEE 802.11ac task force, 2009.

R E S E A R C H M E T H O D S A N D S K I L L S

- Ethnographic methods
- Interviews
- Literature reviews
- Participant observation
- Qualitative methods
- Survey design
- Usability studies
- User studies